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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,672	10/18/2004	Shigeru Tomoceda	28951.2176	4239

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STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER

ENSEY, BRIAN

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/511,672

Applicant(s)

TOMOEDA ET AL.

Examiner

Brian Ensey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/18/04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-4 and 13-14 in the reply filed on 12/28/06 is acknowledged. The traversal is on the ground(s) that all species are sufficiently related and a thorough search may be made without serious burden to the examiner. This has been found persuasive because upon closer examination of the disclosed invention and claims, the Examiner concurs that a thorough search of the elected claims would further comprise a through search of all species.

The requirement for a restriction is therefore withdrawn and all claims are examined on the merits.

Drawings

Figure 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because page 8 is merely a parts list and is not required for examination. Parts identified on page 8 must be included in the description of the invention.

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Removal of page 8 is suggested. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: Applicant should be consistent in naming element 23A. See page 4, line 25 "bar-shaper pole piece 23A" and line 26 "center pole section 23A".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakaso U.S. Patent No. 6,654,475.

Regarding claim 1, Nakaso discloses a loudspeaker comprising a frame coupled to a magnetic circuit formed by supporting in a manner sandwiching at least two pieces of bar magnets (7) with an upper plate (8) and a lower plate (6), a diaphragm (1) coupled to a perimeter of the frame (3), and a voice coil (4) a part of which being disposed in a magnetic gap of the magnetic circuit, wherein the voice coil has a shape of a track (See Fig. 21 and col. 6, line 64 to col. 7, line 39).

Regarding claim 2, Nakaso further discloses the configuration of the magnetic gap is that of a track (See Fig. 21).

Regarding claim 3, Nakaso further discloses the outer configuration of the magnetic circuit is that of a track (See Fig. 21).

Regarding claim 4, Nakaso further discloses the external configuration of the diaphragm is that of a track (See Fig. 21).

Regarding claim 5, Nakaso further discloses the magnetic gap at least has a straight section (See Fig. 21).

Regarding claim 6, Nakaso further discloses the magnetic circuit is formed by dividing the upper plate (8) (See Fig. 21).

Regarding claim 7, Nakaso further discloses the magnetic circuit is formed by dividing the lower plate in the vertical direction (The upper plate is divided from the lower plate in the vertical direction by use of two separate upper plate coupled through the magnets to the lower plate (See Fig. 21).

Regarding claim 13, Nakaso further discloses a module that combines the loudspeaker and an electronic circuit (Can be used in TV's and is therefor inherently a speaker module connected to an electronic circuit, See col. 1, lines 5-22).

Regarding claim 14, Nakaso further discloses an electronic apparatus equipped with
loudspeaker
(Can be used in TV's, See col. 1, lines 5-22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaso as applied to claim 1 above, and further in view of Sueaki Japanese Patent Publication 05-191892.

Regarding claim 8, Nakaso discloses a loudspeaker as claimed. Nakaso does not expressly disclose the lower plate is fabricated by bending a metal sheet. However, Nakaso

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illustrates a lower plate with sides perpendicular to the majority of its base surface (See Fig. 21). Further, Sueaki teaches a lower plate (14) with edges bent in an upward direction into the magnetic gap (See Sueaki Fig. 2). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a bent lower plate for ease of manufacturing (No casting required. Piece can be made from a single flat sheet).

Regarding claim 9, Nakaso discloses a loudspeaker as claimed. Nakaso does not expressly disclose the magnetic circuit is formed by dividing the lower plate in the direction of the thickness. However, Sueaki teaches a lower plate (14) with edges bent in an upward direction into the magnetic gap (See Sueaki Fig. 2). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a two piece lower plate as taught by Sueaki such that smaller material pieces may be used and reduce costs.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaso as applied to claim 1 above, and further in view of Sabato et al. U.S. Patent No. 6,188,774.

Regarding claim 11, Nakaso discloses a loudspeaker as claimed. Nakaso does not expressly disclose the upper plate is fabricated by bending a metal sheet. However, Sabato teaches an upper plate (4) fabricated by bending a metal sheet (See Fig. 1 and col. 2, lines 39-53). Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the top plate of Nakaso with the bent top plate of Sabato for accurate magnet gap to reduce abnormal sounds (See abstract).

Allowable Subject Matter

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Claims 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any response to this action should be mailed to:

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Alexandria, Va. 22313-1450

Or faxed to:

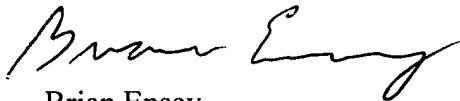
(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to:

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Brian Ensey
Examiner
February 28, 2007